

### Abstract of the Disclosure

A method for the nuclear chlorination of ortho-xylene using a chlorinating agent in the presence of at least one Friedel-Crafts catalyst and chloro-substituted 2,8-dimethylphenoxathiin as co-catalyst. The co-catalyst used is preferably tetrachlorinated 2,8-dimethylphenoxathiin, in particular 1,3,7,9-tetrachloro-2,8-dimethylphenoxathiin of the formula

